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Assessing the competitiveness of Romanian manufacturing industry

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Abstract

The development of an economy involves the fulfilment of many conditions, one of the most important being the competitiveness. An economy is competitive, at macroeconomic level, if adopts those economic policies that ensure the competitiveness at the level of branch and macroeconomic level. For Romania, the increase of competitiveness is the main way to recover the differences compared to the developed countries. Although the Romanian industry was affected by numerous structural and reform transformations, this continues to have an important role for Romanian economy and to represent a key element of sustainable development insurance. In this paper, we proposed, in order to assess the competitiveness of Romanian manufacturing industry, to analyse more quantitative indicators as: the weight of this industry during GDP creation, the relative importance of this sector by analysing the added value and the occupation degree, the losses and earnings of jobs, as well as of productivity. After the analyse, we could conclude that: the manufacturing industry continued to have an important contribution both for the creation of added value and for the occupation, this sector being dominated by the medium-size companies (almost 3000 companies), and in 2003-2008, there were lost many jobs in this sector then in 2008-2013. Although there were progresses after the crisis, the difference compared to the most competitive countries in this domain continued to be, and this aspect imposes the continuation of the efforts for the development of this sector.

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1. Introduction

The development of an economy involves the fulfilment of many conditions, one of the most important being the competitiveness. An economy is competitive, at macroeconomic level, if adopts those economic policies that ensure the competitiveness at the branch and macroeconomic level. So, the competitiveness has to be reached at three levels: economy, industry and company (Reiljan s.a., 1990) and involves the accelerated creation of added value.

The competitiveness represents the capacity to obtain a high productivity based on innovative utilization of human, financial and material resources (Chilian M.N., Jordan M., 2006). For Romania, the increase of competitiveness is the main way to recover the differences compared to the developed countries.

Although the Romanian industry was affected by numerous structural and reform transformations, this continues to have an important role for Romanian economy and to represent a key element of sustainable development insurance. At the level of Romanian industry, the manufacturing industry has an important role for the creation of added value, taking into account its big weight during GDP creation. Together with the significant contribution during the creation of added value and jobs, the manufacturing industry is an important laboratory for innovation, stimulating positive effects on the rest of economy.

The manufacturing industry represents the vector of production structure (European Economic and Social Committee, 2014), and according to NACE Rev.2, contains the following branches: alimentary products, drinks and tobacco; textiles, clothes, leather and footwear; wood, paper, printings; coke and refined petroleum products; chemical products; pharmaceutical products; rubber and plastic materials, other non-metallic mineral products; base metals and metal products, computers, electronic and optical product; electrical equipment; machines and equipment; auto vehicles and transport and furniture equipment and other products.

The evolution of Romanian industry after 1989 could be divided in two periods: the period between 1990 – 2000 when the measures of restructuration and privatization had priority and the period between 2001- present when the intervention of state into the industry reduced, and the evolutions of this sector were rather dictated by the market specific.

From structural point of view, the industry suffered big modifications. So, the companies of big energy consumption branches had to deal with difficulties and many of them had to cease their activity.

In the first ten years of transition, the contribution of manufacturing industry to GDP creation, as result from the table below, reduced significantly, reaching only 22% in 2000. Subsequently, the difference from 1990 reduced; in 2013 this branch contributed to GDP creation in proportion of 26%. Despite the adopted measures of industrial policy, the contribution of manufacturing industry to GDP creation still has to recover a difference of 10.9 percentage points compared to 1990. In other words, in 2013, the contribution of manufacturing industry to GDP creation reached 70.46% from the level registered in 1990.

Table 1. The weight of manufacturing industry in GDP, 1989-2013

Years	1990	2000	2004	2007	2008	2010	2013
The weight of manufacturing industry in GDP	36.9%	22%	23.3%	23.3%	22%	24.3%	26%

Source: kushnirs.org

According to the report elaborated by the European Committee (Competing in a global value chains, 2013), Romania is between the countries that registered significant recoveries at the manufacturing industry level, together with the Baltic Countries, Poland and Slovakia. All these countries both recovered their losses and exceeded the levels registered before the outbreak of crisis. According to Eurostat, in 2010, the weight of the added value of the Romanian manufacturing industry in the total of the added value produced by the non-financial economic activities was of 27.5%, with 0.7 percentage points larger than the average UE27, and the weight of employees was of 30.4%, with 7.8 percentage points larger than the average UE27. So, from the point of view of the relative importance of this branch, in 2010, Romania occupied the position 11 of 28 member states of EU, as result from the table below:

Table 2. Relative importance of manufacturing (NACE, Section C), 2010

Country	Value added (%)	Employment (%)	Country	Value added (%)	Employment (%)
Belgium	27.2	20.2	Luxembourg	13.3	14.5
Bulgaria	24.9	27.8	Hungary	37.9	26.9
Czech Republic	35.3	34.6	Malta	:	:
Denmark	22.8	19.5	Netherlands	19.3	13.1
Germany	35.1	27.8	Austria	29.8	23.4
Estonia	26.3	26.2	Poland	29.8	28.7

Ireland	36.4	15.3	Portugal	23.0	21.4
Greece	:	:	Romania	27.5	30.4
Spain	22.3	16.8	Slovenia	35.1	32.7
France	22.2	20.4	Slovakia	30.8	30.7
Italy	30.7	26.1	Finland	31.3	26.1
Cyprus	13.2	14.5	Sweden	27.5	22.7
Latvia	20.0	20.1	United Kingdom	18.1	14.3
Lithuania	26.7	23.1	Croatia	23.1	26.1

Source: Eurostat

Although the weight of the Romanian occupied population from manufacturing industry decreased in the last years, we could observe from the data of table no. 2 that this is among the biggest of EU countries, together with Czech Republic, Slovenia and Slovakia. Therewith, the EU countries with a high occupation degree in this industry also register a bigger weight of gross added value, pointing out the difference between Romania and these countries. This difference could be recovered by increasing the competitiveness, the innovation and the development of technology. So, although we could talk about positive evolutions generally, at the level of Romanian manufacturing industry, compared to the other EU countries, the results was not enough strong, in order to record a long-term tendency of increase for the manufacturing industry in assembly.

Some domains of manufacturing industry had a descendent evolution due to the small investments into their modernisation. The economic-financial crisis initiated in 2008 amplified the problems of these domains, reaching to their exit from the market.

However, within the manufacturing industry is a diversity concerning the competitive environment: while some branches have a significant demographic dynamism and a lot of companies compete for relatively small market quotas, other industries are considered, on efficiency criterion, natural monopolies, and others remain state monopolies, where the liberalisation of prices hasn't been done yet (for example, the energetic sector).

Approximate 25% of Romanian manufacturing industry, as number of employees and turnover, is made of two main branches: alimentary industry and industry of road transport vehicles. Also, the industry of metallic constructions and metal products is among the first five branches of Romanian manufacturing industry (Cojocaru V., Munteanu C., Neagu F., 2012).

In the conditions of the strong concurrence existent on European markets, the manufacturing industry could become competitive only if it could ensure quality products, with high degree of technologization and if it uses well-qualified workforce.

The number of the employees from manufacturing industry was continuously reduced from 1995 to 2010. In the first year after the economic crisis, it could be observed a slow increase of the number of employees compared to the previous year, of only 4.19 %. But, the difference compared to 1995 is of 779 000 employees.

Table no 3. The evolution of the number of employees from the manufacturing industry between 1995-2011

Years	1995	2000	2004	2007	2008	2010	2011
Number of employees(thousands)	2020	1689	1632	1467	1404	1191	1241

Source: WIOD, calculations of authors

The analysis of the enterprises employees' number of Romanian manufacturing industry shows the fact that this is dominated by the enterprises with an average number of employees. This aspect is also supported by the data of Amadeus data base. So, in 2013, there were carrying out their activity in the Romanian manufacturing industry 616 companies with a number of employees between 249 and 999, 101 companies with over 1000 employees, and 3000 companies with a number of employees between 50 and 249. The company with the most employees from manufacturing industry is Automobile – Dacia SA, that has over 14000 employees. The next company with the most employees is Delphi Packard Romania SRL, that has 8518 employees, respectively to a difference of approximate 5500 employees compared to the companies with the most employees.

Another important aspect, regarding the characteristics of workforce from manufacturing industry domain, is the fact that the majority of workforce is employed in strongly intensive branches, generally with low added value. For example, the articles of clothing, leather and footwear industry ensures together 19,18% of the total workforce of manufacturing industry, compared to 4,55 % in EU, in the conditions in which these industries have not a high turnover. So, these industries are powerful dependent on cheap workforce and have not an important technological component. Long-term, as the costs of the workforce increase, these branches would lose from their importance at national level.

The following graphic presents the evolution of jobs loss and gain, at EU level, in 2003-2013, in manufacturing industry. So, we could observe that after the outbreak of economic-financial crisis from 2008, the creation of jobs in this domain decreased considerably. The smaller loss of jobs from 2008-2013, compared to 2003-2008, is explained by the application of some policies of jobs maintenance, as by the important weight of the sector for the starting over of the economic growth.

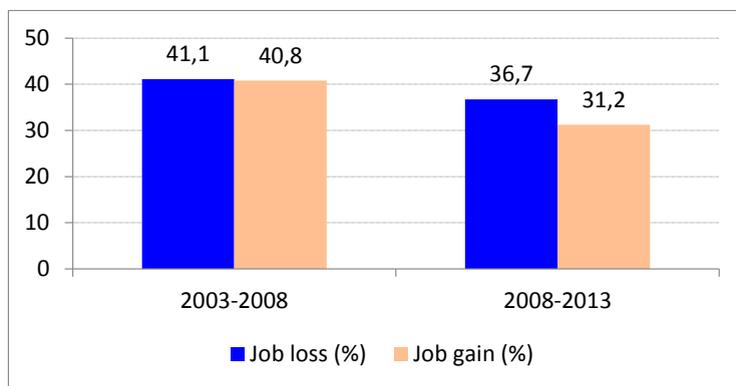


Fig. 1. Job loss and gain in manufacturing sector, EU, 2003-2008 and 2008-2013 (%)

Source: ERM Annual Report 2013, Monitoring and managing restructuring in the 21st century http://eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2013/80/en/1/EF1380EN.pdf

From the point of view of industrial structure specialization, Romania was on third place in EU, in 2012, after Ireland and Sweden. Generally, as an economy is big-size, this one has a bigger potential of activities diversification. So, the most diversified economies from EU are France, Spain, Italy and Germany. Therewith, while the countries have a reduced income per capita tend to specialize in agricultures, the countries with high income tend to specialize in the industries that involve medium and big-size technologies and in intensive services of knowledge. As the income increases, an economy changes its specialization on long-term from agriculture to industry and than from industry to services.

The labour productivity per employee in industry followed an ascending direction in 2010-2014. This was based on good results registered in the manufacturing industry, which, through the overwhelming weight in the total of the industrial production marked the trajectory of the entire industrial productivity (Anghelache C., 2014).

Table no 4. The evolution of the productivity in manufacturing industry in 1995-2011

Years	1995	2000	2004	2007	2008	2010	2011
Labour productivity (lei/employee)	2.51	8.36	25.64	45.22	55.95	70.74	75.14

Source: WIOD, calculations of authors

Taking into account all these, Romania is far behind the strongly developed European states. From the competition structure point of view, though the labour productivity is more under the European Union average, the hierarchy of the industrial branches from Romania is similar with the one existent in the other European States. Specific to Romania

are the industry of non-metallic minerals products and the industry of computers and electronic products manufacturing that have a very good productivity compared to the other branches. This characteristic could be capitalized especially within the commercial relationship.

The connexions between the manufacturing industry and the services are in a continuous increase. As many as possible companies that act in the manufacturing industry use the services as part of their business process. The companies appeal to services for the development of their products, for their selling, and for the horizontal business activities, as the account and logistic activities. From the production perspective point of view, the utilization of services is motivated by the productivity increase and costs reduction. The companies follow the improvement of their competitiveness by costs reduction, productivity increase and product and process innovations. All these efforts stimulate the companies' development and the creation of new jobs.

Taking into account this analyse, we could conclude with the following: the increase of competitiveness is the main way to recover the differences compared to the developed countries, although the Romanian industry was affected by numerous structural and reform transformations, this continues to have an important role for the Romanian economy and to represent a key element of sustainable development insurance, together with the significant contribution of the added value and jobs, the manufacturing industry represent an important laboratory for innovation, stimulating positive effects on the rest of economy.

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References

- Anghelache Constantin, România 2014. Starea economică pe calea redresării, Editura Economică, București, 2014, pp. 131;
- Chilian M.N., Iordan M., Elemente de definire și măsurare a competitivității regionale. Cazul României, *Revista Oeconomica*, nr. 1/2007, <http://oeconomica.org.ro/files/pdf/38.pdf>;
- Cojocaru V., Munteanu C., Neagu F., Noi direcții de politică industrială și modificările structurale necesare, Editura Economică, București, 2012;
- ERM Annual Report 2013, Monitoring and managing restructuring in the 21st century http://eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2013/80/en/1/EF1380EN.pdf
- Prisecaru P., Papatulică M., Dumitrescu A.L., Calanter P., Politică de reindustrializare din UE și România, available at <http://www.iem.ro/fisiere/Sinteze-comunic%C4%83ri/politica-reindustrializare.pdf>;
- Reiljan, J.; Hinrikus, M. și Ivanov, A., Key Issues in Defining and Analyzing the Competitiveness of a Country, University of Tartu, Finland, Faculty of Economics and Business Administration, 'Working Paper Series', nr. 1, 2000
- Avizul Comitetului Economic și Social European privind Relocalizarea industriilor în UE în cadrul procesului de reindustrializare, available at http://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacturing_statistics_-_NACE_Rev_2#Publications
- <http://www.eesc.europa.eu/?i=portal.en.ccmi-opinions.29629>
- http://ec.europa.eu/enterprise/policies/industrial-competitiveness/competitiveness-analysis/eu-industrial-structure/files/eu_ind_struct_report_2013_en.pdf
- http://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacture_of_food_products_statistics_NACE_Rev_2#Database
- http://ec.europa.eu/eurostat/statistics-explained/index.php/European_business_facts_and_figures
- http://www.wiod.org/new_site/database/seas.htm - WORLD INPUT-OUTPUT DATABASE
- Energy Efficiency Policies and Measures in Romania, disponibil la <http://www.odyssee-mure.eu/publications/national-reports> OECD STAN.org